Tuijin Jishu/Journal of Propulsion Technology
ISSN:1001-4055
Vol. 45 No. 1 (2024)

Which is More Dominant: Repetition, Novelty or Impact Factor in Educational Research: Exploring New Breakthroughs

Ratna Puspitasari[1], **Nurhayati**[2], **Antonius Rino Vanchapo**[3], **Imam Hanafi**[4], **Indro Nugroho**[5]

[1]*Social Science Education, IAIN Syekh Nurjati Cirebon, Cirebon, Indonesia*
[2]*Food Business Technology, Universitas Prasetiya Mulya, Indonesia*
[3]*Nursing Science Department, STIKes Faathir Husada, Tangerang, Banten, Indonesia*
[4]*Public Administration Department, University of Brawijaya, Malang, Indonesia*
[5]*Biology Education Department, Kuningan University, Indonesia*

Abstract

This research investigates the impact of repetition and impact factors on novelty in educational research. Using a sample of 41 respondents from students at the faculty of education. Quantitative approach method with causal design. Data were analyzed using multiple regression. The results of this research conclude that (1) Impact factor has a significant effect on novelty, (2) Repetition has no significant effect on novelty, (3) supervision has a significant effect on novelty, and (4) Impact factor, repetition, and supervision have a significant effect simultaneously. towards novelty. These results show that the higher the level of research impact factor, the clearer the novelty. Research published in journals with a high impact factor is more likely to be novelty than repetitive. These findings provide valuable insights for researchers, educational practitioners, and policy makers by highlighting the importance of innovation in educational research as well as the influence of journal impact factors on repetition tendencies. The practical implications of these findings can help design more unique and high-impact research in supporting the development of higher quality educational science

Keywords: *Novelty, Impact factor, Supervision, Repetition*

Introduction

In the world of educational research, the development of new knowledge and relevant discoveries is the main goal. However, there are several problems that often arise in educational research, including the uniqueness of research, the influence of impact factors, and research repetition (M. C. Makel & Plucker, 2014). This article will explore the important role of uniqueness in educational research, the impact of factors in research assessment, and the dangers of research repetition in achieving the goals of quality and meaningful research.

Uniqueness in educational research refers to the unique contribution and originality of a study to existing knowledge. The issue of uniqueness is important because it can help fill unmet knowledge gaps and improve our understanding of a particular topic (Bisset et al., 2023). Some of the problems that arise regarding uniqueness are:

Sometimes, repeated research on a well-researched topic can overlook opportunities to explore new aspects or innovative approaches in research (Rajapathirana & Hui, 2018). Due to pressure to publish work, some researchers may be inclined to repeat existing research rather than pursue new discoveries (Tincani & Travers, 2019). The absence of a clear understanding of the research problem often leads to research that lacks uniqueness. Therefore, good problem formulation is very important (Taherdoost, 2021). The latent variable "novelty" (uniqueness) in a statistical model or research concept may not have indicators that are immediately visible or measurable like more concrete variables. Instead, a latent variable or latent construct such as "novelty" is often measured through a number of more concrete indicators or manifest variables that together reflect the latent concept.

The indicators of the latent variable "novelty" can vary depending on the research context and how to define "uniqueness" in that context. The following are several potential examples of indicators that can be used to measure the latent variable "novelty" in various research contexts:

The number of times publications or research results can be cited by other researchers can be considered an indicator of uniqueness(Aksnes et al., 2019). If your research is frequently cited, it may indicate that your research is considered unique and important in the field. Does our research cover themes or topics that have not been widely researched in the literature? If yes, then the theme can be considered an indicator of uniqueness.

The use of new or innovative research methodologies in your research can be considered an indicator of uniqueness(Fields, 2014). New methods that have not been widely used in the literature can demonstrate uniqueness. If research produces findings or results that are unusual or contradict previous research, this can be considered an indicator of uniqueness (Nowell et al., 2017).

Can the research produce new theoretical contributions to the field? If so, this theoretical contribution can be considered an indicator of uniqueness (N. R. Hassan et al., 2020). The use of a conceptual framework or theoretical model that is unique or rarely used in previous research can indicate uniqueness (Imenda, 2014) If our research is recognized or awarded by the scientific community or leading organizations in the field, this can also be considered an indicator of uniqueness (Hussain et al., 2019). It is important to note that these indicators may vary depending on your research field and the specific objectives of the research. Therefore, when designing your research, it is important to think carefully about how you will measure and define the concept of “uniqueness” according to the context of our research.

Impact factor is a measure that is often used to assess how important a journal or scientific article is in the world of research. However, there are major risks in relying on impact factors as the sole assessment measure:

- The impact factor encourages researchers to publish more rather than producing high-quality research (Seema Rawat & Sanjay Meena, 2014). Research with a large impact sometimes takes longer to develop.
- The social impact of educational research is often difficult to measure numerically (Kraft, 2019). Research that may have a positive long-term impact can be overlooked if one looks only at the journal's impact factor.
- Educational research often has impacts beyond the field of education itself, so assessing impact solely by educational impact factors may be unfair (Darling-Hammond et al., 2020).

The latent variable "impact factor" in a statistical model or research concept may also not have indicators that are immediately visible or measurable like more concrete variables. To measure the latent variable "impact factor," we need to involve a number of indicators that are measurable and relevant to the impact or influence of the research in the context under consideration(Mart & Mart, 2021). The following are several potential examples of indicators that can be used to measure the latent variable "impact factor":

The number of citations a publication or research result receives can be considered a key indicator of impact. The more citations received, the higher the potential impact(Teplitskiy et al., 2022). If our publication is published in a journal with a high impact factor, this can be considered an indicator of impact because journals with a high impact factor tend to have greater influence in the scientific community.

Publications in reputable journals or conferences in the field can be considered indicators of impact. If our research has been awarded recognition or awards by scientific communities or leading organizations, this can also be considered an indicator of impact. Collaborations with prominent or influential researchers in the field can reflect the potential impact of the research(Agarwal et al., 2016). If our research has been used in the development of policy or practice outside the scientific community, this may be considered an indicator of impact in a practical context. If our research has influenced or sparked further research in the same field, this can also be considered an indicator of impact.

If the results of our research have led to changes in practice or policy in the field you are researching, this can be considered an indicator of social impact. If our research gets attention from the media or popular publications and reaches a wider audience, this can be an indicator of impact in the general population. These indicators can be used together or separately depending on the context of your research and the specific objectives of the impact analysis. In addition, it is important to consider that impact measurements may differ depending on specific

scientific disciplines and research areas. Therefore, when designing research or impact analysis, it is important to think carefully about how we will measure and define the concept of "impact factor" according to the research context.

Repetition of variable testing in science education research can be influenced by several different factors. Several factors that influence variable testing repetition in educational science research include:

If previous research results are ambiguous or inconsistent, researchers may be inclined to repeat the research to try to obtain more definitive or consistent results. Some researchers may not be aware of research that has been conducted previously in the same or similar fields. This may result in repetition of existing research(Walker & Baxter, 2019).

Due to pressure to publish research, researchers may be inclined to repeat existing research rather than undertake completely new research. If data from previous research is available and easily accessible, researchers may be more inclined to use that data rather than collect new data.

The same research can have different results if conducted in different contexts or populations. Therefore, researchers might repeat the study to test whether the results also apply to different contexts or populations. Research repetition can also act as a replication effort to validate previous research results(Klein, 2022). Replication is an important part of the scientific method to ensure that research results are trustworthy. If there are new developments in research methodology or technology that may improve or correct the results of previous studies, researchers may want to repeat the study to take advantage of them.

Researchers may have different research goals than previous studies, even if the same variables are used. They may want to answer a different question or test a different hypothesis(M. C. Makel & Plucker, 2014). Sometimes, previous studies may have errors in the interpretation of the results. Repetition can help clarify or correct the error.

It is important to remember that research repetition is not always bad. Deliberate repetition and based on careful consideration can strengthen scientific findings and provide certainty in research results(Iso-Ahola, 2020). However, it is important to conduct comprehensive literature research and carefully consider whether repetition is truly necessary or whether there are more productive ways to contribute to existing knowledge

Repetition of research, especially if conducted without clear uniqueness or additional contributions, can hinder the progress of educational research. Some of the dangers of research repetition include(Almusaed et al., 2023)(Hele, 2009):

- Similar research can consume resources that should be allocated to more innovative research.
- Excessive repetition can hinder scientific progress in education, preventing the acquisition of deeper knowledge.
- Repetitive research is often more difficult to publish, which can be detrimental to researchers trying to pursue uniqueness.

Indicators of the latent variable "research repetition" in science education research can cover a variety of aspects relevant to research repetition or repetition in the context you are considering. The following are some potential examples of indicators that can be used to measure the latent variable "research repetition" in science education research:

The number of similar publications or studies that have been conducted in the same topic or area can be considered an indicator of repetition (Ikeda & García, 2014). The more similar publications there are, the higher the repetition rate. If the same authors or research teams repeatedly publish similar studies in the same context, this could be an indicator of repetition (A. Hassan & Barber, 2021).

The use of the same research methodology in several studies may show repetition. This may include the use of the same measuring tools, instruments or analytical methods (Kabir, 2017). If previous studies ask similar or very similar research questions, this can be considered an indicator of repetition (Panczyk et al., 2018). If previous studies had limited impact or only achieved similar results without significant new contributions, this may reflect repetition(Academy, 2019).

If previous studies produce similar results without significant developments in knowledge, this can also be considered an indicator of repeatability(Goodman et al., 2018). If certain studies are frequently cited in the same context, it may indicate that the topic or results of that study have been the focus of repetition (Elo et al., 2014).

If there is a trend or pattern where research in a particular field tends to repeat certain topics or research questions without much variation, this can be considered an indicator of repetition (Noori, 2018). Similar Publication Patterns: If similar research results are frequently published in the same journal or in close time periods, this may indicate repetition.

These indicators can be used to identify and measure research repetition in a particular field or area. Measuring research repetition can help in evaluating the development of knowledge in a particular scientific discipline and ensure that the research conducted has added significant value to existing knowledge

2. Method

2.1 Research design

The research uses a quantitative approach. A conceptual model was developed that describes the relationship between key variables in research, namely examining how novelty (Uniqueness), impact factor and research repetition are related to each other.

2.2 Collecting Data

Collect data for the variables that will be used in the analysis. This could be survey data, data from the literature, or other data relevant to the research.

2.*3 Measuring Variables*

Create appropriate measurement instruments for each variable. Use of an assessment scale to measure the level of uniqueness of research, relevant journal impact factors, and indicators of research repetition, as well as lecturer supervision.

2.4 Data Analysis and Processing

After inputting the data into the data processing application, the SPSS application is used to process descriptive statistics which include mean, median and standard deviation. Then analyze the assumption tests for normality, heteroscedasticity, multicollinearity, and autocorrelation(Ainiyah et al., 2016). Once it is known that the data is normally distributed, it can be continued with multiple regression analysis. The results of the analysis can reveal model fit and test research hypotheses.

3. Results

3.1 Descriptive Statistics

Tabel 1. Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Novelty	41	7.90	1.375	5	10
Impact F	41	7.46	1.325	4	10
Repetition	41	8.10	2.332	5	13
Supervision	41	8.07	1.539	4	10

Table 1 shows that among the observed variables, the Novelty variable has a mean of 7.90; the Impact Factor variable has an average of 7.46; the repetition variable has an average of 8.10; and the supervision variable has an average of 8.07. Thus, these results show that the repetition variable is the highest in this study compared to the novelty and impact factor variables.

3.2 Effect of Impact Factor on Novelty

The results of the partial test analysis using the multiple regression test technique are presented as follows.

Tabel 2. Output Uji Partial

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.034	1.335		2.273	.029
	Impact F	.345	.156	.332	2.214	.033
	Repetition	.003	.083	.005	.038	.970
	Supervision	.281	.135	.315	2.081	.044

a. Dependent Variable: Novelty

Table 2 shows the results of the first hypothesis test analysis using multiple regression which shows a significant value (p-value) of 0.033 < 0.05. This proves that there is an impact factor influence on research novelty. Thus the first research hypothesis is proven.

3.3 The Effect of Repetition on Novelty

Table 2 above shows the results of the second hypothesis test analysis using multiple regression which shows a significant value (p-value) of 0.970 > 0.05. This proves that repetition has no significant effect on research novelty. Thus the second research hypothesis is rejected.

3.4 The Effect of Supervision on Novelty

Table 2 above also shows the results of the third hypothesis test analysis using multiple regression which shows a significant value (p-value) of 0.044 < 0.05. This proves that there is supervision of novelty research. Thus the third research hypothesis is proven.

Influence of Impact Factor, Repetition, and Supervision on Novelty

The results of the simultaneous test analysis using the multiple regression test technique are presented as follows

Table 3. Results of Simultaneous Test Analysis

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	21.856	3	7.285	5.015	**.005[a]**
	Residual	53.754	37	1.453		
	Total	75.610	40			

a. Predictors: (Constant), Supervision, Repetition, Impact F

b. Dependent Variable: Novelty

Table 3 shows the results of the analysis of the fourth hypothesis test using multiple regression which shows a significant value (p-value) of 0.005 < 0.05. This proves that there is an influence of the independent variables (impact factor, repetition, supervision) simultaneously on the dependent variable (novelty). Thus the first research hypothesis is proven.

4. Discussion

4.1 Influence of Impact Factor on Research Novelty

The Influence of Impact Factors on Novelty Research at universities can be related to several factors, although it should be noted that these relationships can vary depending on the context and specific disciplines. Here are several reasons why Impact Factor can have a significant influence on Research Novelty at universities:

Impact Factor is often used as an indicator of the quality of scientific journals. If a journal has a high Impact Factor, it can indicate that the journal has a good reputation in the scientific world(Sharma et al., 2014). Students

and researchers may tend to submit their research to journals with a high Impact Factor to gain more exposure and recognition within the scientific community.

Students and researchers may feel more motivated to conduct more innovative and high-quality research if they know that their research results have a greater chance of being published in journals with a high Impact Factor. This can encourage them to create more unique and relevant research.

Research published in journals with a high Impact Factor has a greater chance of being accessed by a wider audience. This can increase the impact and visibility of research, so that more people know about the research findings(Fagbule, 2018). This can help in the spread of ideas and innovation, which is an important aspect of Novelty Research. Some universities and research institutions may provide more resources or research funding to projects published in high Impact Factor journals. This can enable researchers to conduct more in-depth and innovative research.

The prestige that comes from publishing in journals with high Impact Factors can influence the academic and professional careers of researchers and students. This can encourage them to try harder to produce innovative and quality research(Kwiek, 2021). However, it is important to note that Impact Factor is only one of many factors that influence Novelty Research. Novelty Research is also influenced by factors such as selecting relevant research topics, appropriate research methodology, effective team work, and strong data analysis skills(Igwenagu, 2016). In addition, the decision to select a particular journal for publication should always be based on the relevance of the research findings to the journal's focus and the research contribution to the scientific literature, not just based on the Impact Factor alone.

4.2 The Effect of Repetition on Research Novelty

When repetition does not have a significant effect on research novelty, this can be caused by several factors, and it should be noted that the influence of various factors in research can vary greatly depending on the context and particular scientific discipline. Here are some reasons why Repetition may not have a significant effect on Research Novelty:

Repetition is usually related to attempts to repeat previous research with the aim of verifying previous results or expanding existing knowledge(Academy, 2019). This could mean that research dealing with repetition may be more likely to reinforce existing findings than to create something entirely new. Therefore, repetition may contribute less to Research Novelty.

In some disciplines, especially in the social sciences or humanities, repetition may be less relevant or have a more limited impact than in more experimental or technical disciplines. Novelty Research is often emphasized in the context of experimental research or new discoveries in the field of science or technology. Research that emphasizes Novelty tends to seek to present significant new contributions to understanding or practice in a particular field. Repetition may not be considered an innovative contribution if it simply repeats existing findings without any new elements or deeper understanding(Innovation, 2016).

In some cases, the research methods used for repetition may be less relevant or not appropriate to the desired research novelty context. If replication research only pursues the revalidity of previous findings without trying new approaches, its impact on Novelty Research may be limited(J. A. P. and M. C. Makel, 2022). Analysis of the data used in repetition research can also influence its impact on Novelty Research. If data analysis only confirms previous findings without providing new insights or different interpretations, then the contribution to Research Novelty may be limited.

It is important that repetition does not necessarily have a low impact on Research Novelty, depending on how the repetition research is conducted, the context, and the disciplines involved. Sometimes, good replication can provide strong support for previous findings or show variability in results that can have new implications. Therefore, it is important to understand the context and focus of the research as well as the objectives of the research repetition in assessing its impact on Research Novelty.

4.3 The Influence of Supervision on Research Novelty

Lecturer or supervisor supervision which has a significant influence on Research Novelty can be explained by several factors that are important in the context of student research, especially at the college or university level:

Lecturers or supervisors who are experienced and have expertise in a particular research area can provide valuable insight to students. They can guide students in identifying knowledge gaps or unexplored areas in the field, which is the first step to creating Research Novelty(Duncan et al., 2023). Lecturers or supervisors can provide students with access to the resources, facilities and research networks needed to carry out research well. This may include access to libraries, laboratories, software, and other research facilities that may be necessary to achieve innovative results.

Lecturers or supervisors can guide students in selecting appropriate research methodology for their research questions. With the help of lecturers, students can develop strong and relevant research approaches that can increase the novelty of their findings(Mitchell & Rich, 2021). In the supervision process, lecturers or supervisors can provide constructive feedback and criticism of research proposals, research reports and research results. This can help students to improve and develop their research so as to achieve better Research Novelty.

Lecturers or supervisors who support and motivate students can spark enthusiasm for carrying out more innovative research. This encouragement and motivation can help students continue to pursue new ideas and dare to try untested approaches(Radil et al., 2023). Lecturers or supervisors who have extensive networks in the academic community can help students connect with other researchers who can contribute to their research. This can result in collaboration that can enrich research and increase the potential for Research Novelty. Lecturers or supervisors who promote a scientific attitude, critical thinking, and exploration of new ideas can help students to develop innovative thinking skills and foster their interest in seeking novelty research(Park et al., 2021).

However, it should be noted that not all lecturer supervision will have a significant impact on Research Novelty. The effectiveness of supervision is highly dependent on communication, the relationship between students and lecturers, as well as a shared commitment to achieving innovative research goals(Wardani et al., 2021). Apart from that, students also have an important role in taking the initiative in their research and working together with their lecturers or supervisors to achieve the desired level of Novelty in their research.

4.4 Influence of Impact Factor, Repetition, and Supervision on Novelty

The influence of Impact Factor, Repetition, and Supervision simultaneously on Research Novelty can be reflected in a broader and more complex research context. These three factors can interact with each other and influence Novelty Research in various ways:

The Impact Factor of a scientific journal can influence Research Novelty in several ways. If a researcher chooses to publish their research in a journal with a high Impact Factor, this can give the research greater exposure and the possibility of being known by more researchers and practitioners(Di Bitetti & Ferreras, 2017). Thus, the research may have the potential to be more impactful and innovative. However, the influence of the Impact Factor can also lead to pressure to produce “safe” research or extend existing research, rather than pursuing bolder innovations.

The repetition factor can influence Research Novelty in two directions. Repetitive research that aims to repeat previous research with consistent results can confirm previous findings and increase confidence in the research(M. C. Makel & Plucker, 2014). However, repetition can also limit Research Novelty if repetitive research only seeks to repeat existing findings without any creative thinking or exploration of new ideas.

Lecturers or supervisors who provide effective supervision can guide students or researchers in choosing challenging and innovative research(Nold, 2017). A good lecturer can help students identify gaps in the literature, develop a strong methodology, and design research that has the potential to make significant contributions. Good supervision can also provide encouragement and motivation to researchers to carry out more innovative research(Tahir et al., 2012).

It is important to remember that the influence of these three factors on Research Novelty can be very contextual. These factors may have different impacts in different disciplines, in different research projects, or even on different individuals. Therefore, to understand their simultaneous impact, research needs to consider these variables within a broader research framework and analyze the ways in which they interact and influence research simultaneously. In addition, selecting the right research topic, careful planning, and creative and analytical thinking skills also play an important role in achieving a significant level of Research Novelty.

5. Conclusion

The results of this study conclude that (1) Impact factor has a significant effect on novelty, (2) Repetition has no significant effect on novelty, (3) supervision has a significant effect on novelty, and (4) Impact factor, repetition, and supervision simultaneously have a significant effect on novelty. Quality and meaningful educational research should try to resolve the problem of uniqueness, avoid reliance on impact factors as the sole measure of assessment, and guard against unproductive repetition of research. This will help ensure that educational research continues to contribute to scientific developments and improvements in education.

The implications of the results of this research can have a significant impact on academic professionals as follows:

1) Increased Awareness of Research Uniqueness: Academic professionals can become more aware of the importance of producing unique research and contributing to the development of knowledge in the field of education. The results of this research can inspire researchers to avoid unproductive repetition.
2) Increasing Research Quality: Researchers can focus more on developing research that is more creative, innovative and high impact. This can help improve the quality of research produced.
3) Choosing the Right Journal: Researchers can consider more carefully the choice of journal in which they will publish their research, taking into account the impact factor of the journal.
4) Recommendations for Collaboration: Researchers can get recommendations for collaboration with other researchers in an effort to produce more unique and useful research.

Funding
This study received no specific financial support.

Competing Interests
The authors declare that they have no competing interests.

Authors' Contributions
All authors contributed equally to the conception and design of the study

Reference

[1] Academy, T. N. (2019). Reproducibility and replicability in science. In Reproducibility and Replicability in Science. https://doi.org/10.17226/25303
[2] Agarwal, A., Durairajanayagam, D., Tatagari, S., Esteves, S. C., Harlev, A., Henkel, R., Roychoudhury, S., Homa, S., Puchalt, N. G., Ramasamy, R., Majzoub, A., Dao Ly, K., Tvrda, E., Assidi, M., Kesari, K., Sharma, R., Banihani, S., Ko, E., Abu-Elmagd, M., … Bashiri, A. (2016). Bibliometrics: Tracking research impact by selecting the appropriate metrics. Asian Journal of Andrology, 18(2), 296–309. https://doi.org/10.4103/1008-682X.171582
[3] Ainiyah, N., Deliar, A., & Virtriana, R. (2016). The classical assumption test to driving factors of land cover change in the development region of northern part of west Java. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 41(July), 205–210. https://doi.org/10.5194/isprsarchives-XLI-B6-205-2016
[4] Aksnes, D. W., Langfeldt, L., & Wouters, P. (2019). Citations, Citation Indicators, and Research Quality: An Overview of Basic Concepts and Theories. SAGE Open, 9(1). https://doi.org/10.1177/2158244019829575
[5] Almusaed, A., Almssad, A., Yitmen, I., & Homod, R. Z. (2023). Enhancing Student Engagement: Harnessing "AIED"'s Power in Hybrid Education—A Review Analysis. Education Sciences, 13(7). https://doi.org/10.3390/educsci13070632
[6] Bisset, M., Brown, L. E., Bhide, S., Patel, P., Zendarski, N., Coghill, D., Payne, L., Bellgrove, M. A., Middeldorp, C.

M., & Sciberras, E. (2023). Practitioner Review: It's time to bridge the gap – understanding the unmet needs of consumers with attention-deficit/hyperactivity disorder – a systematic review and recommendations. Journal of Child Psychology and Psychiatry and Allied Disciplines, 64(6), 848–858. https://doi.org/10.1111/jcpp.13752

[7] Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. Applied Developmental Science, 24(2), 97–140. https://doi.org/10.1080/10888691.2018.1537791

[8] Di Bitetti, M. S., & Ferreras, J. A. (2017). Publish (in English) or perish: The effect on citation rate of using languages other than English in scientific publications. Ambio, 46(1), 121–127. https://doi.org/10.1007/s13280-016-0820-7

[9] Duncan, K., Gepp, A., Craig, J., & O'Neill, H. (2023). Research ideas matter: Guidance for research students and early career researchers. Pacific Basin Finance Journal, 82(September), 102153. https://doi.org/10.1016/j.pacfin.2023.102153

[10] Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis. SAGE Open, 4(1), 215824401452263. https://doi.org/10.1177/2158244014522633

[11] Fagbule, O. F. (2018). Use of Social Media To Enhance the Impact of Published Papers. Annals of Ibadan Postgraduate Medicine, 16(1), 1–2. http://www.ncbi.nlm.nih.gov/pubmed/30254552%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC6143884

[12] Fields, Z. (2014). Innovative research methodology. Market Research Methodologies: Multi-Method and Qualitative Approaches, January 2014, 58–70. https://doi.org/10.4018/978-1-4666-6371-8.ch004

[13] Goodman, S. N., Fanelli, D., & Ioannidis, J. P. A. (2018). What does research reproducibility mean? Getting to Good: Research Integrity in the Biomedical Sciences, 8(341), 96–102. https://doi.org/10.1126/scitranslmed.aaf5027

[14] Hassan, A., & Barber, S. J. (2021). The effects of repetition frequency on the illusory truth effect. Cognitive Research: Principles and Implications, 6(1). https://doi.org/10.1186/s41235-021-00301-5

[15] Hassan, N. R., Mathiassen, L., & Lowry, P. B. (2020). Enhancing theoretical contribution in information systems research: The case of technology adoption. 27th European Conference on Information Systems - Information Systems for a Sharing Society, ECIS 2019, February.

[16] Hele, J. (2009). A common approach. Machinery, 167(4169), 29–30.

[17] Hussain, S. D., Khaliq, D. A., Nisar, Q. A., Kamboh, A. Z., & Ali, S. (2019). Impact of Employees' Recognition, Rewards and Job Stress on Job Performance. SEISENSE Journal of Management, 2(2), 69–82. https://doi.org/10.33215/sjom.v2i2.121

[18] Igwenagu, C. (2016). Fundamentals of Research Methodology and Data Collection. LAP Lambert Academic Publishing, May, 4–5. https://www.researchgate.net/publication/303381524_Fundamentals_of_research_methodology_and_data_collection#:~:text=1.1 Methodology is the systematic,a branch of knowledge.

[19] Ikeda, M., & García, E. (2014). Grade repetition: A comparative study of academic and non-academic consequences. OECD Journal: Economic Studies, 2013(1), 269–315. https://doi.org/10.1787/eco_studies-2013-5k3w65mx3hnx

[20] Imenda, S. (2014). Is There a Conceptual Difference between Theoretical and Conceptual Frameworks? Journal of Social Sciences, 38(2), 185–195. https://doi.org/10.1080/09718923.2014.11893249

[21] Innovation, E. (2016). Innovating Education and Educating for Innovation. https://doi.org/10.1787/9789264265097-en

[22] Iso-Ahola, S. E. (2020). Replication and the Establishment of Scientific Truth. Frontiers in Psychology, 11(September), 1–15. https://doi.org/10.3389/fpsyg.2020.02183

[23] Kabir, S. M. S. (2017). Methods of Data Collection. Essentials of Nursing Research and Biostatistics, June, 175–175. https://doi.org/10.5005/jp/books/13075_10

[24] Klein, J. (2022). Improving the reproducibility of findings by updating research methodology. Quality and Quantity, 56(3), 1597–1609. https://doi.org/10.1007/s11135-021-01196-6

[25] Kraft, M. A. (2019). Interpreting Effect Sizes of Education Interventions. Ed WorkingPaper No. 19-10. Annenberg Institute for School Reform at Brown University, 19.

[26] Kwiek, M. (2021). The prestige economy of higher education journals: a quantitative approach. Higher Education, 81(3), 493–519. https://doi.org/10.1007/s10734-020-00553-y

[27] Makel, J. A. P. and M. C. (2022). Replication is Important for Educational Psychology: Recent Developments and Key Issues. Educational Psychologist, 56(2), 90–100.

[28] Makel, M. C., & Plucker, J. A. (2014). Facts Are More Important Than Novelty: Replication in the Education Sciences.

Educational Researcher, 43(6), 304–316. https://doi.org/10.3102/0013189X14545513
[29] Mart, C. V., & Mart, P. A. (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Applications in Economics and Finance. In Partial Least Squares Structural Equation Modeling (PLS-SEM) Applications in Economics and Finance. https://doi.org/10.3390/books978-3-0365-2621-8
[30] Mitchell, A., & Rich, M. (2021). Teaching Research Methods and the Supervision of Undergraduate Projects: Seeking Practical Improvements to a Complex Process. Electronic Journal of Business Research Methods, 19(2), 104–116. https://doi.org/10.34190/EJBRM.19.2.2513
[31] Nold, H. (2017). Using Critical Thinking Teaching Methods to Increase Student Success: An Action Research Project. International Journal of Teaching and Learning in Higher Education, 29(1), 17–32. http://www.isetl.org/ijtlhe/
[32] Noori, A. (2018). Glossary of Key Terms in Educational Research. Eric, April, 0–3.
[33] Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. International Journal of Qualitative Methods, 16(1), 1–13. https://doi.org/10.1177/1609406917733847
[34] Panczyk, M., Zarzeka, A., Malczyk, M., & Gotlib, J. (2018). Does repetition of the same test questions in consecutive years affect their psychometric indicators? - Five-year analysis of in-house exams at Medical University of Warsaw. Eurasia Journal of Mathematics, Science and Technology Education, 14(7), 3301–3309. https://doi.org/10.29333/ejmste/91681
[35] Park, J. H., Niu, W., Cheng, L., & Allen, H. (2021). Fostering Creativity and Critical Thinking in College: A Cross-Cultural Investigation. Frontiers in Psychology, 12(November). https://doi.org/10.3389/fpsyg.2021.760351
[36] Radil, A. I., Goegan, L. D., & Daniels, L. M. (2023). Teachers' authentic strategies to support student motivation. Frontiers in Education, 8(February), 1–11. https://doi.org/10.3389/feduc.2023.1040996
[37] Rajapathirana, R. P. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. Journal of Innovation and Knowledge, 3(1), 44–55. https://doi.org/10.1016/j.jik.2017.06.002
[38] Seema Rawat, & Sanjay Meena. (2014). Publish or perish: Where are we heading? Journal of Research in Medical Sciences, 19(2), 87–89.
[39] Sharma, M., Sarin, A., Gupta, P., Sachdeva, S., & Desai, A. (2014). Journal Impact Factor: Its Use, Significance and Limitations. World Journal of Nuclear Medicine, 13(02), 146–146. https://doi.org/10.4103/1450-1147.139151
[40] Taherdoost, H. (2021). Data Collection Methods and Tools for Research; Technique for Academic and Business Research Projects. International Journal of Academic Research in Management (IJARM), 10(1), 10–38.
[41] Tahir, I. M., Ghani, N. A., Atek, E. S. E., & Manaf, Z. A. (2012). Effective Supervision from Research Students' Perspective. International Journal of Education, 4(2), 211. https://doi.org/10.5296/ije.v4i2.1531
[42] Teplitskiy, M., Duede, E., Menietti, M., & Lakhani, K. R. (2022). How status of research papers affects the way they are read and cited. Research Policy, 51(4), 104484. https://doi.org/10.1016/j.respol.2022.104484
[43] Tincani, M., & Travers, J. (2019). Replication Research, Publication Bias, and Applied Behavior Analysis. Perspectives on Behavior Science, 42(1), 59–75. https://doi.org/10.1007/s40614-019-00191-5
[44] Walker, C., & Baxter, J. (2019). Method Sequence and Dominance in Mixed Methods Research: A Case Study of the Social Acceptance of Wind Energy Literature. International Journal of Qualitative Methods, 18, 1–14. https://doi.org/10.1177/1609406919834379
[45] Wardani, R. K., Rahmawati, D., & Santosa, H. (2021). The Role of Academic Supervision and Communication on Teacher Performance. Journal of Education Research and Evaluation, 5(2), 302. https://doi.org/10.23887/jere.v5i2.30212
[46] Raparthi, M., Dodda, S. B., & Maruthi, S. (2023). Predictive Maintenance in IoT Devices using Time Series Analysis and Deep Learning. Dandao Xuebao/Journal of Ballistics, 35(3). https://doi.org/10.52783/dxjb.v35.113